

1 less band width is used.

2 MR. A. NAFTALIN: Thank you.

3 MR. ARONOWITZ: Your Honor?

4 JUDGE STEINBERG: Yes?

5 THE WITNESS: May I ask a question?

6 MR. A. NAFTALIN: No, actually not.

7 THE WITNESS: Well, it is not clear to me. That
8 equipment requires an antenna which picks up the undesired
9 signal. Was there such an installation?

10 MR. A. NAFTALIN: Obviously I cannot testify to
11 that, but there will be testimony.

12 MR. ARONOWITZ: Your Honor?

13 JUDGE STEINBERG: Yes, Mr. Aronowitz?

14 MR. ARONOWITZ: I was just trying to --

15 MR. A. NAFTALIN: I will be glad to furnish
16 copies.

17 MR. ARONOWITZ: Is it in the case somewhere?

18 JUDGE STEINBERG: No. It is not in the exhibits.

19 MR. ARONOWITZ: Okay. What is this equipment
20 called again?

21 JUDGE STEINBERG: Co-channel eliminator.

22 MR. A. NAFTALIN: Your Honor, I could ask that
23 this be marked if I can then take it back to make copies.

24 JUDGE STEINBERG: If you want to.

25 MR. A. NAFTALIN: What is the next number?

1 JUDGE STEINBERG: I will tell you in a minute.

2 Hang on. The next would be No. 31.

3 MR. ARONOWITZ: Your Honor, I would object to the
4 admission of that.

5 JUDGE STEINBERG: It has not been offered it. It
6 has not even been identified.

7 MR. A. NAFTALIN: I would like to mark it for
8 identification.

9 JUDGE STEINBERG: Why do you not give it to me?
10 It is a two-page document marked with the title Co-Channel
11 Eliminators. The company that apparently puts this out is
12 called Microwave Filter Company in East Syracuse, New York.
13 It appears to be part of a larger document because it has
14 Page Nos. 12 and 13 on the bottom.

15 We will mark that for identification as Turro
16 Exhibit 31.

17 (The document referred to was
18 marked for identification as
19 Turro Exhibit No. 31.)

20 JUDGE STEINBERG: I will give it back to Mr.
21 Naftalin, who will make copies for everybody. You will need
22 one for the reporter and one for everybody else.

23 MR. A. NAFTALIN: Yes. Thank you very much, Your
24 Honor.

25 JUDGE STEINBERG: Sure. Do you want to request

1 its admission now, or do you want to wait until you can ask
2 somebody about it?

3 MR. A. NAFTALIN: I see no need to ask for its
4 admission now.

5 JUDGE STEINBERG: Okay.

6 MR. A. NAFTALIN: I just wanted to be sure that we
7 have a record.

8 JUDGE STEINBERG: And that was the document that
9 was shown to Mr. Cohen.

10 It is not being offered at this time. It has just
11 been marked for identification.

12 MR. A. NAFTALIN: Could I have a short break?

13 JUDGE STEINBERG: Sure. Let's go off the record.

14 (Whereupon, a short recess was taken.)

15 JUDGE STEINBERG: We are back on the record.

16 Mr. Alan Naftalin?

17 MR. A. NAFTALIN: Yes. That completes my
18 cross-examination, Your Honor.

19 JUDGE STEINBERG: Mr. Riley?

20 MR. RILEY: I have no questions.

21 JUDGE STEINBERG: Okay. Any redirect?

22 MR. ARONOWITZ: Excuse me?

23 JUDGE STEINBERG: Any redirect?

24 MR. ARONOWITZ: Yes, Your Honor. Before we start
25 that, I just want to make a note for the record.

1 This co-channel eliminator, the matter that was
2 identified as Turro Exhibit 31, was not previously offered
3 or disclosed. We have had no opportunity to prepare for it
4 or to review it prior to its use today.

5 We cannot competently cross-examine or redirect
6 examination on this, not having seen it. We believe its use
7 is highly prejudicial, and I just want that noted for the
8 record.

9 JUDGE STEINBERG: Why do you not give Mr.
10 Aronowitz a copy or your copy of it? We will go off the
11 record, and you can prepare. You have your engineer here.

12 MR. ARONOWITZ: Your Honor, we could not deal with
13 it with Serge yesterday. They have made a representation
14 that it was there in 1995. Had we known, we could have at
15 least asked a question or at least gone over it with Mr.
16 Loginow, the inspector. Its use today after his testimony
17 is certainly not entirely helpful to us.

18 JUDGE STEINBERG: Of course it is not entirely
19 helpful. That is why they used it.

20 MR. ARONOWITZ: In fact, it is prejudicial.

21 JUDGE STEINBERG: Why do I not hear from counsel
22 for Turro, and then I will --

23 MR. A. NAFTALIN: I do not believe it was there in
24 August. I think it had been replaced by August of 1995 when
25 Mr. Loginow was there. We will --

1 MR. ARONOWITZ: You just said it was in use in
2 August of 1995.

3 JUDGE STEINBERG: Wait. Do not interrupt.

4 MR. A. NAFTALIN: I did not say August. I said it
5 was in use in 1994 and 1995. It was in use at the
6 beginning. If we can go off the record a minute, I will
7 find out. I do not know the exact month that they stopped
8 using it.

9 JUDGE STEINBERG: Let me just say that we have
10 testimony from Mr. Cohen that says that a combination of
11 sophisticated filtering and antenna discrimination could not
12 eliminate completely interference from the first adjacent
13 channel station.

14 What has been presented was material of an
15 impeachment nature which goes to show that that statement
16 might not be completely accurately, given additional facts.
17 You do not exchange with the other party impeachment
18 material.

19 If you need to redirect on it, here is the
20 impeachment material. You look at it, you formulate your
21 questions, and then you ask questions. That is the way it
22 works.

23 MR. ARONOWITZ: We could still do that, Your
24 Honor. However --

25 JUDGE STEINBERG: Right. So do it. However what?

1 MR. ARONOWITZ: The assumption has been made that
2 this was present when Mr. Loginow was there and --

3 JUDGE STEINBERG: Who made the assumption?

4 MR. ARONOWITZ: -- at least in 1994 and 1995.

5 JUDGE STEINBERG: We are going to get a witness
6 that is going to establish exactly when it was being used.
7 This goes to impeachment.

8 Mr. Cohen did a theoretical study, and the
9 theoretical study said this will not completely eliminate
10 it. Mr. Cohen was presented with something that said well,
11 it could exacerbate the problem. Is that correct, Mr.
12 Cohen?

13 THE WITNESS: That's correct. It's also contrary
14 to Mr. Hurst's testimony.

15 JUDGE STEINBERG: Okay. We can get Mr. Hurst.
16 When we get to Mr. Hurst, we will ask Mr. Hurst. Somebody
17 will have the right to ask Mr. Hurst. Whether they ask him
18 or not, that is their business. It is perfectly proper
19 evidence, and it was perfectly proper to use it in the
20 manner in which it was used.

21 Now, why do we not go off the record and let your
22 counsel and your engineer study the material? When you are
23 ready to continue, you can let me know.

24 We are off the record.

25 (Whereupon, a short recess was taken.)

1 JUDGE STEINBERG: We are back on the record.

2 Mr. Aronowitz, have you had a sufficient period of
3 time to look over what has been marked for identification as
4 Turro Exhibit 31, and are you prepared to redirect?

5 MR. ARONOWITZ: We will find out. Yes, I think
6 so, Your Honor.

7 REDIRECT EXAMINATION

8 BY MR. ARONOWITZ:

9 Q Mr. Cohen, my name is Alan Aronowitz. I am with
10 the Federal Communication Commission. I am Bureau counsel
11 in this case. We met earlier this morning, but I wanted to
12 identify myself.

13 I wanted to ask you just a couple of quick follow
14 up questions. I believe you testified that when you were
15 putting together your study with respect to the signal
16 strength, you were talking about 90 percent of the time it
17 would be at 5.5 dBu. Could you explain why you relied on
18 the 90 percent confidence factor?

19 A I used a 90 percent confidence factor because this
20 is for rebroadcast purposes. For rebroadcast purposes, one
21 has to have a reliable signal as close to 100 percent of the
22 time as possible.

23 Q Thank you. I believe you testified that with a 50
24 percent degree of reliability, you would get a signal
25 strength at about 15.9 dBu when asked by Mr. Naftalin?

1 A That is correct, sir. That is correct, sir.
2 Fifty percent of the time rather than 90 percent of the
3 time.

4 Q Do you have an opinion as to the use of the 50
5 percent reliability factor at such a level?

6 A We're mixing up two things, Mr. Aronowitz. One is
7 a confidence factor at 90 percent, and the other is a time
8 factor of 90 percent of the time.

9 My belief is that in doing the study, it is
10 necessary to use at least a 90 percent of the time factor
11 for the signal, as well as a 90 percent confidence factor.

12 Q Mr. Cohen, I believe you have in front of you as
13 part of Turro Exhibit 2 the statement of Herman Hurst
14 referring to earlier.

15 A Yes, sir, I do.

16 Q Could I direct your attention to Page 3?

17 A Yes, sir.

18 Q About halfway down there is a sentence that
19 starts, "Finally, the performance of the receiver..." I
20 would say it is about ten or 12 lines down.

21 A Yes, sir. I see that.

22 Q Could you please read from the word finally to the
23 end of the paragraph?

24 JUDGE STEINBERG: Do you want him to read it out
25 loud or to himself?

1 MR. ARONOWITZ: To himself.

2 (Pause.)

3 THE WITNESS: I have read that.

4 BY MR. ARONOWITZ:

5 Q And do you have an opinion on that which you just
6 read?

7 A Yes, sir.

8 Q And what is that opinion?

9 A My opinion is that on the basis of what Mr. Hurst
10 has described here, which is a 33 dB discrimination between
11 desired and undesired signal, a 30 dB attenuation for a
12 notch filter and a 20 dB antenna discrimination, if indeed
13 that can be achieved, that the total of all of that, which
14 is 83 dB, would not be sufficient to eliminate adjacent
15 channel interference.

16 That does not include the filter factor which I
17 suggested during Mr. Naftalin's cross-examination that any
18 signal which was reflected off of buildings in the direction
19 of the Monticello station would further decrease the
20 probability that an interference free signal could be
21 received.

22 MR. ARONOWITZ: May I approach the witness, Your
23 Honor?

24 JUDGE STEINBERG: Yes.

25 MR. ARONOWITZ: I am now placing before the

1 witness what was identified as Turro Exhibit 31.

2 BY MR. ARONOWITZ:

3 Q Mr. Cohen, I believe Mr. Alan Naftalin showed you
4 that earlier.

5 A Yes, sir.

6 Q Is it fair to say that these co-channel eliminator
7 materials are promotional materials from the manufacturer?

8 A Yes, sir. That's what it is.

9 Q And in the lower left-hand corner there is a model
10 station that is used in the promotional materials?

11 A Yes, sir.

12 Q Would that model station as depicted in the
13 promotional materials be an adequate model for Mr. Turro's
14 station to achieve those same results?

15 A It would require a second antenna as shown in the
16 diagram and with a perfectly matched system; that is, as to
17 the impedance into which the antennas look perfectly match
18 the impedance of the antenna itself in order to duplicate at
19 least approximately what the manufacturer has shown.

20 Q So you would need to use the model to achieve
21 these results in the promotional materials?

22 A Unquestionably.

23 Q And they would not --

24 MR. A. NAFTALIN: I did not hear the answer.

25 THE WITNESS: Unquestionably.

1 BY MR. ARONOWITZ:

2 Q In your experience, have you ever seen a
3 translator configured as in the model?

4 A No, never the translator. No.

5 Q Have you ever seen a radio station configured as
6 in this model?

7 A No, sir, not a radio station.

8 MR. ARONOWITZ: One moment.

9 JUDGE STEINBERG: You said that you had seen some
10 cable systems? Is that what you said before, or did I
11 misinterpret it?

12 THE WITNESS: No, you did not, sir, in cable
13 systems where I have seen this system used to eliminate
14 generally co-channel interference.

15 JUDGE STEINBERG: And co-channel interference is
16 different from adjacent channel interference?

17 THE WITNESS: Yes, sir. Yes, sir.

18 MR. ARONOWITZ: One moment.

19 (Pause.)

20 MR. ARONOWITZ: Your Honor, that is it for the
21 moment, but I might ask with respect to the co-channel
22 eliminator question if I might just take another moment to
23 formulate a question?

24 What has happened is in the lateness of it, I am
25 trying to assimilate information from three different people

1 to put together a coherent question.

2 JUDGE STEINBERG: Let's go off the record. Take
3 your time.

4 MR. ARONOWITZ: I apologize.

5 JUDGE STEINBERG: We will go off the record.

6 (Whereupon, a short recess was taken.)

7 JUDGE STEINBERG: We are back on the record.

8 I think Mr. Aronowitz said he was going to turn
9 the questioning over to Mr. Helmick. Is that accurate?

10 MR. HELMICK: That seems to be the case, Your
11 Honor.

12 JUDGE STEINBERG: Does anybody have any objection
13 to Mr. Helmick jumping in at this point?

14 MR. A. NAFTALIN: As long as we do not cover the
15 same ground all over again.

16 JUDGE STEINBERG: No. I do not think we will.

17 REDIRECT EXAMINATION

18 BY MR. HELMICK:

19 Q Mr. Cohen, do you have in front of you the Turro
20 exhibits?

21 A Yes, sir.

22 Q I want to direct your attention to Turro Exhibit
23 2, the statement of Mr. Hurst, and specifically at Page 3 of
24 that statement.

25 Mr. Aronowitz asked you some questions about that

1 previously. Would you just take a moment to look at that
2 again before I ask you a question?

3 (Pause.)

4 A Yes, sir.

5 Q Mr. Hurst's statement states that the initial
6 installation, the Monticello to Fort Lee installation,
7 included a first adjacent channel notch filter providing
8 approximately 30 dB further discrimination. Do you see
9 that, sir?

10 A Yes, sir.

11 Q I would like to give you this material on the
12 co-channel eliminators.

13 JUDGE STEINBERG: That is Turro Exhibit 31.

14 MR. HELMICK: Turro Exhibit 31.

15 BY MR. HELMICK:

16 Q First of all, does that material discuss
17 discrimination for a first adjacent channel anywhere in it?

18 A Yes, it does.

19 Q What is the discrimination that they have in the
20 materials that you have in front of you?

21 A The specifications for the equipment say that the
22 minimum attenuation adjustment is 25 dB. They don't say at
23 that point whether that is co-channel or adjacent channel.
24 I'm assuming that that applied to either co-channel or
25 adjacent channel.

1 Q Do you have an opinion on whether the material as
2 described in Turro Exhibit 31 is consistent with what Mr.
3 Hurst describes in his statement as to the discrimination
4 for first adjacent channel notch filter?

5 A In the sense that this material says that they are
6 specifying that attenuation can be at least 25 dB, it is
7 consistent with what Mr. Hurst said here that the
8 attenuation actually achieved is 30 dB.

9 Q Mr. Cohen, with reference to Page 3 of Mr. Hurst's
10 statement, given the first adjacent channel discrimination
11 which he discusses and describes in his statement, do you
12 have an opinion accepting Mr. Hurst's statement?

13 Do you have an opinion on whether or not you would
14 be able to receive a consistent signal capable or suitable
15 for rebroadcast purposes at Fort Lee?

16 MR. A. NAFTALIN: Asked and answered.

17 JUDGE STEINBERG: I do not think so. I will
18 overrule that.

19 THE WITNESS: Based upon what Mr. Hurst describes,
20 the receiver discrimination of 33 dB, notch filter
21 discrimination of 30 dB, 20 dB discrimination by the
22 antenna, adding up to 83 dB, my conclusion would be that
23 this is not consistent with having a broadcast quality
24 consistent signal.

25

1 BY MR. HELMICK:

2 Q I would like to refer you to Page 2 of Mr.
3 Hurst's statement, Turro Exhibit No. 2. If you would, sir,
4 take a moment to review that page?

5 A The entire page, Mr. Helmick, or some portion of
6 it?

7 Q Yes, sir. Primarily the first paragraph, I
8 believe, and part of the second paragraph.

9 (Pause.)

10 A Yes, sir.

11 Q Based upon your theoretical study, what is your
12 conclusion as to whether or not an acceptable signal can be
13 received at Fort Lee from WJUX in Monticello?

14 MR. A. NAFTALIN: Asked and answered.

15 JUDGE STEINBERG: That is right in the written
16 statement. That is in Bureau Exhibit 5.

17 MR. HELMICK: It is a preliminary question, Your
18 Honor. I want to avoid leading the witness. I am sure Mr.
19 Riley will --

20 JUDGE STEINBERG: Mr. Riley has been good today.

21 MR. HELMICK: Let's eliminate the preliminary
22 question.

23 BY MR. HELMICK:

24 Q Do you have an opinion as to Mr. Hurst's
25 discussion of a hot spot existing on the roof of the Fort

1 Lee translator building?

2 A I do.

3 Q And what is that, sir?

4 A My opinion is that if Mr. Hurst did find a point
5 on the roof where the signal strength was greater than what
6 would be expected, what was found elsewhere on the roof,
7 that would very likely be a very temporary thing, highly
8 variable.

9 In order to confirm that there was indeed a
10 location on the roof which consistently gave higher ratings,
11 it would be necessary to take extended observations because
12 at the distance that is involved here to WJUX, some 72
13 miles, the signal strength is highly variable.

14 The phase of that signal strength is variable as
15 well so that any combination of circumstances where you get
16 a focusing of signal would be variable in the same fashion
17 as the signal is variable in both magnitude and phase. A
18 hot spot to provide a consistent, good quality reception as
19 Mr. Hurst describes is highly unlikely.

20 Q In your professional opinion, is there any
21 possible basis, your personal opinion and experience, to
22 explain and have you ever encountered a hot spot, if you
23 will, where there is a consistently good signal over an
24 extended period of time?

25 A The probability is extremely low. In order to

1 achieve that type of condition of a consistently high
2 signal, you would have to have some extremely specialized
3 conditions where the configuration of objects on the roof
4 are such that you got the effect of a corner reflector so
5 that if you were at the focal point of the corner reflector
6 you would get an enhanced signal, but I've never encountered
7 a situation such as that in my over 50 years of engineering
8 experience.

9 Q In Mr. Hurst's statement, does he provide any
10 explanation for a hot spot?

11 A He does not.

12 MR. HELMICK: Can we go off the record for a
13 moment, Your Honor?

14 JUDGE STEINBERG: Yes.

15 (Whereupon, a short recess was taken.)

16 JUDGE STEINBERG: Let's go back on the record.

17 BY MR. HELMICK:

18 Q Mr. Cohen, I believe you testified that in your 50
19 years of professional experience, you have never encountered
20 a hot spot situation as described in Mr. Hurst's statement.
21 Is that correct?

22 A Not on any rooftop. That's right, sir.

23 Q Not on any rooftop. And you have done a
24 theoretical study to show that the signal strength at the
25 Fort Lee transmitter site is not acceptable for broadcast

1 acceptable quality? Is that correct?

2 A Yes, sir.

3 Q Is there any explanation in your professional
4 experience, sir, that could explain the phenomenon described
5 in Mr. Hurst's statement?

6 MR. A. NAFTALIN: I object to that, Your Honor. I
7 do not think that has anything to do with the direct
8 examination.

9 JUDGE STEINBERG: I think that is right.

10 MR. HELMICK: It is what, Your Honor?

11 JUDGE STEINBERG: It is not within the scope of
12 the direct. That is the essence of the objection.

13 MR. A. NAFTALIN: It is beyond cross.

14 JUDGE STEINBERG: I mean cross. I am sorry. This
15 is redirect.

16 MR. HELMICK: Your Honor, we have the experts
17 here. I think we are going to have to call Mr. Cohen back
18 for rebuttal, or do we want to get a response here?

19 JUDGE STEINBERG: Well, I actually would like to
20 hear the answer

21 MR. A. NAFTALIN: You are going to overrule my
22 objection?

23 JUDGE STEINBERG: It is a good objection. What I
24 will do is I will let Mr. Cohen answer the question and
25 treat this as redirect. Well, it actually is redirect. I

1 will give you ample leeway to test the answer because I
2 think it would be helpful to the record.

3 With that wishy-washy ruling, I will allow the
4 answer.

5 THE WITNESS: Could I have a restatement of the
6 question, please?

7 JUDGE STEINBERG: It is basically based on your
8 experience, is there any way that you can explain the
9 results that appear in Mr. Hurst's statement on Page 2?

10 Is that the essence of the question?

11 MR. HELMICK: I think I rephrased it.

12 BY MR. HELMICK:

13 Q Is there any way that you could explain Mr.
14 Hurst's statement as to the phenomenon of this hot spot?

15 A No, sir, not the phenomenon of the hot spot. The
16 hot spot? No.

17 Insofar as the hot spot is concerned, there's
18 nothing in my experience which would support a conclusion
19 that such a hot spot could be found in any consistent
20 fashion.

21 JUDGE STEINBERG: I just want to ask a question so
22 that you can take it into consideration.

23 MR. HELMICK: That is fine.

24 JUDGE STEINBERG: What I anticipate is going to
25 happen here is that you said you did a theoretical study,

1 and the theoretical study shows that this cannot be
2 happening.

3 By this cannot be happening, what I am talking
4 about is a signal going from Monticello to Fort Lee of
5 sufficient quality to be rebroadcast no matter what filter
6 is used, no matter what configuration is used. Is that a
7 fair nutshell summary of what your testimony is?

8 THE WITNESS: Yes, sir, it is.

9 JUDGE STEINBERG: Then we are going to get other
10 people up on the stand that are saying in spite of all this,
11 it is happening. This is happening. We are receiving on
12 the rooftop in Fort Lee a signal that is sufficient to be
13 rebroadcast by the translator. That is what the essence of
14 this testimony is.

15 You say it cannot be done. They say but it is
16 being done. Is it possible, in your opinion, that what is
17 theoretically impossible in your opinion is on the ground
18 possible? You understand what I mean by on the ground. In
19 actuality, is it actually happening?

20 THE WITNESS: Yes, Your Honor. The key to what I
21 am saying, though, is a consistent signal which would be
22 suitable for rebroadcast, something you can rely on day
23 after day throughout the seasons of the year. At any
24 moment, it is possible because of the variability in
25 propagation that the signal strength would be great enough

1 that you could have an acceptable signal for rebroadcast.

2 My testimony is that I cannot conceive how with
3 the path obstructed as this one is as shown in my exhibit
4 and based upon the calculations using what I believe to be
5 the best propagation model, it is my belief that -- let me
6 put it this way. It's just not credible to me that there
7 could be a signal of sufficient strength in a consistent
8 fashion that would permit delivery of a suitable rebroadcast
9 throughout the area that we serve.

10 JUDGE STEINBERG: Okay. Now, if the signal drops
11 below a certain level, below what you would consider
12 suitable for rebroadcast, and the signal is being picked up
13 in Fort Lee and rebroadcast on the translator, what would
14 the listener hear if someone was tuned to 103.1? Is it
15 103.1?

16 THE WITNESS: Yes.

17 JUDGE STEINBERG: What would the listener hear?
18 Would the listener still hear the programming of the
19 station, but it would be lousy? Why do I not just let you
20 answer?

21 THE WITNESS: There would be two things. One is
22 that it would get very noisy.

23 JUDGE STEINBERG: It would be hissy and staticy?

24 THE WITNESS: That is correct. The other thing is
25 that the adjacent channel signal would break in from time to

1 time.

2 JUDGE STEINBERG: So from time to time you would
3 hear WBAI?

4 THE WITNESS: That is right.

5 JUDGE STEINBERG: It would be sort of bleeding in?

6 THE WITNESS: Yes, sir.

7 JUDGE STEINBERG: Okay. I know what is going to
8 happen with people saying it cannot happen and other people
9 saying whether it can or cannot, it is happening. I am
10 going to have to be the one that decides it. I am trying to
11 make my job as easy as possible, which that in itself is
12 impossible.

13 Mr. Alan Naftalin?

14 MR. A. NAFTALIN: Yes. Thank you.

15 RE-CROSS-EXAMINATION

16 BY MR. A. NAFTALIN:

17 Q Mr. Cohen, a number of things. First, Turro
18 Exhibit 31. You said it was a promotional piece. Did you
19 think it was a lying promotional piece?

20 A No. I'm not suggesting that.

21 Q And did it in fact represent or have a
22 representation about 50 dB of protection discrimination
23 adjacent channel?

24 A It does show that, but which isn't --

25 Q I understand you have your qualifications, but it

1 did show that?

2 A It did show that, but that is not a specification.

3 Q I understand. You took that as a representation,
4 though?

5 A I took that as a representation of something that
6 was actually observed in the laboratory.

7 Q You think they were representing that it could
8 only be done in a laboratory?

9 A What I'm suggesting is that as much discrimination
10 as they have shown, you'd have to be pretty close to
11 laboratory conditions with everything perfect.

12 Q Okay. It is easier, however, to take care of
13 adjacent channel interference and co-channel interference
14 generally, is it not?

15 A Well, the methodology that is employed here in
16 this co-channel eliminator is the same for co-channel and
17 adjacent channel, so I don't --

18 Q You think it would be about the same?

19 A Yes, it would be. It would be about the same.

20 Q All right. Those things, as you said, are used
21 for cable television?

22 A That's the only place I have seen it used, yes.

23 Q Yes. Which means that they are used to deal with
24 interference to television signals which are six megahertz?

25 A A band with a six megahertz --

1 Q Band. Which is a lot more than an FM station,
2 right?

3 A Yes, indeed.

4 Q So, clearly, there is enough band width for the FM
5 station?

6 A I don't think that's a fair representation. What
7 is the phasing that is done is normally on the amplitude
8 modulated carrier which carries the visual signal and if
9 that video carrier is phased out more or less completely,
10 the co-channel interference, or it could be adjacent channel
11 interference, would be pretty well eliminated.

12 On the other hand, an FM signal swings back and
13 forth in frequency, unlike the amplitude modulated video
14 carrier, so the situation is different.

15 Q If you take out the visual carrier and leave the
16 side bands, will they not still show up?

17 A At a much reduced level.

18 Q So to take of it completely, it has to have enough
19 band width for more than just the visual carrier?

20 A Well, completely -- the whole principle of this is
21 to introduce a signal which has the opposite phase of the
22 desired signal in order to cancel it out and that is
23 inherently a fairly narrow band function.

24 Q Okay. Your Longley-Rice predictions start off
25 with a median field of 25.9 dB. Did I get the right one?

1 Twenty-five point nine dBu. Is that right?

2 A I believe that is correct.

3 Q Okay. Then you knock that down by ten dB for a
4 confidence factor, correct?

5 A That's to increase the confidence factor from 50
6 percent to 90 percent.

7 Q From what?

8 A From about 50 percent to 90 percent.

9 Q Okay. But this whole thing is a statistical
10 approach, is it not? Methodology?

11 A It has to be because of the variability of
12 propagation at these frequencies.

13 Q I understand, but there is another way to get an
14 idea about reliability, is there not, and that is just by
15 listening every day?

16 A Yes, listening every day.

17 Q Okay. If you are running this thing and you
18 listen every day, you can tell right away whether you have
19 an adequate signal or not. That is correct?

20 A If you listen and you're getting a satisfactory
21 reception --

22 Q That is right.

23 A -- yes, indeed.

24 Q If you are not getting one, you can go up there
25 and try to do something about finding a better spot on the